



Environmental Protection Agency

101 Court Street - Room 205

Evansville, IN 47708

Phone (812) 435-6145 * Fax (812) 435-6155

Website <http://evansvillegov.net/evans/epa>

Mayor Russell G. Lloyd, Jr.

January 31, 2002

Mr. Rick Richardson
Sky Cylinder Testing
2220 Lexington Road
P.O. Box 18116
Evansville, IN 47719-1116

Re: Registered Construction and Operation Status,
163-15089-00156

Dear Mr. Richardson:

The application from Sky Cylinder Testing, received on September 26, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following spray paint booth, cure oven, and conveyor line to be located at 2220 Lexington Road, Evansville, Indiana, is classified as Registered:

- (a) One (1) paint booth, using one (1) HVLP spray gun, capable of painting forty (40) industrial gas steel cylinders per hour. Exhaust vented at 8800 cfm through a 2.5 ft. diameter, 25.4 ft. high stack.
- (b) One (1) Natural Gas fired cure oven, rated at 1.0 mm BTU/hr., exhausting at 1800 cfm through a 1.0 ft. diameter, 22.5 ft. high stack.
- (c) One conveyor line, which is not an emissions unit.

The following conditions shall be applicable:

- 1) The source is located in Center Township, in the City of Evansville, in Vanderburgh County and is subject to 326 IAC 5-1-2(1) (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

- 2) Pursuant to 326 IAC 6-3-2(c) (Particulate Emissions Limitations):
The particulate matter (PM) from the paint booth shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Compliance will be assumed if the following requirements are met:

- (a) To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stack (S1) while the booth is in operation.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftop and the nearby ground.

326 IAC 8-2-9 (Volatile Organic Compounds, Surface Coating emissions limitations: miscellaneous metal coating operations)

This source performs miscellaneous metal coating operations as described in 326 IAC 8-2-1(a)(4) and has actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls and is therefore subject to 326 IAC 8-2-9. The source shall use coatings that comply with the VOC content limitations as described in 326 IAC 8-2-9(d).

326 IAC 2-6 (Annual Emission Statement)

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15th of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

- (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

And

City of Evansville
Environmental Protection Agency
Suite 205, Riverside One Building
101 Court Street
Evansville, IN 47708

- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and the Evansville Environmental Protection Agency on or before the date it is due.

5) 326 IAC 2-5.5-4(a)(3) (Annual Notice):

An authorized individual shall provide an annual notice to the Evansville EPA and the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3)). The annual notice shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

And

City of Evansville
Environmental Protection Agency
Suite 205, Riverside One Building
101 Court Street
Evansville, IN 47708

no later than March 1st of each year, with the annual notice being submitted in the format attached.

The annual notice required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and the Evansville Environmental Protection Agency on or before the date it is due.

This registration is the first registration approval issued to this source, which had been previously issued a Certificate of Operation #01-0697 by the City of Evansville EPA. The source may operate according to 326 IAC 2-5.5.

An application or notification shall be submitted in accordance with 326 IAC 2 to the IDEM, Office of Air Quality and the City of Evansville Environmental Protection Agency if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by Dona J. Bergman
Dona J. Bergman, Director
Evansville EPA

cc: IDEM – SWRO
IDEM - OAQ

Registration Annual Notification

This form should be used to comply with the notification requirements under **326 IAC 2-5.5-4(a)(3)**

Company Name:	Sky Cylinder Testing
Address:	2220 Lexington Road P.O. Box 18116
City:	Evansville, IN 47719 - 1116
Authorized individual:	
Phone #:	812/423-1759
Registration #:	163-15089-00156

I hereby certify that Sky Cylinder Testing is still in operation and is in compliance with the requirements of Registration **163-15089-00156**.

Name (typed):
Title:
Signature:
Date:

**Evansville Environmental Protection Agency
and
Indiana Department of Environmental Management**

Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Sky Cylinder Testing
Source Location: 2220 Lexington Road
P.O. Box 18116
Evansville, IN 47719-1116
County: Vanderburgh
SIC Code: 8113
Operation Permit No.: 163-15089-00156
Permit Reviewer: Dona J. Bergman, Evansville EPA

The Evansville EPA and the Office of Air Quality (OAQ) have reviewed an application from Sky Cylinder Testing relating to the construction and operation of paint system consisting of a spray paint booth, a cure oven, and a conveyor line.

Permitted Emission Units and Pollution Control Equipment

Sky Cylinder Testing has been operating one (1) spray paint booth under a City of Evansville Operating Permit #0697. The source has applied to the City of Evansville EPA for a permit modification to remove the existing spray paint booth and install a new spray paint booth and the auxiliary equipment listed below. The installation of the new spray paint booth changes the status of this source from exemption level to registration.

- (d) One (1) paint booth, using one (1) HVLP spray gun, which is capable of painting forty (40) industrial gas steel cylinders per hour. Exhaust is vented at 8800 cfm through a 2.5 ft. diameter, 25.4 ft. high stack.
- (e) One (1) Natural Gas fired cure oven, rated at 1.0 mm Btu/hr., exhausting at 1800 cfm through a 1.0 ft. diameter, 22.5 ft. high stack.
- (f) A conveyor line, which is not an emissions unit.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) City of Evansville Certificate of Operation 01-0697, issued on May 30, 2001.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
1	Paint booth	24.5	2.5	8800	ambient
2	Cure Oven	22.5	1.0	1800	≤ 120

Sky Cylinder Testing
Evansville, Indiana
Permit Reviewer: Dona J. Bergman, EEPA

TSD163-15089-00155
Page 2 of 4

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The Evansville EPA staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 26, 2001, with additional information received on October 17, 2001.

Emission Calculations

See Evansville EPA Emissions Calculations attached.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.

Pollutant	Potential To Emit (tons/year)
PM	All particulate is assumed to be PM-10
PM-10	10.65
SO ₂	0.0025
VOC	13.43
CO	0.35
NO _x	0.42

- (a) The Potential to Emit (as defined in 326 IAC 2-7-1(29)) of VOCs are equal to or greater than 10 tons per year and less than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2.

The Potential to Emit (as defined in 326 IAC 2-7-1(29)) of PM-10 is equal to or greater than 10 tons per year and less than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2.

- (b) The Potential to Emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2.

- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Sky Cylinder Testing
Evansville, Indiana
Permit Reviewer: Dona J. Bergman, EEPA

TSD163-15089-00155
Page 3 of 4

Based upon the source's potential to emit of criteria pollutants, the Evansville EPA has determined this source meets the criteria outlined in 326 IAC 2-5.1-2 and will be considered a Registered Source.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Vanderburgh County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Maintenance
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Vanderburgh County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the total emissions from this Registration **163-15089-00156** is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the Evansville EPA inspector assigned to the source.

Federal Rule Applicability

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year in Vanderburgh County of VOCs. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by **April 15** of each year and contain the minimum requirements as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

The source is located in Center Township in the City of Evansville, in Vanderburgh County and is subject to 326 IAC 5-1-2(1) (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60,

Sky Cylinder Testing
Evansville, Indiana
Permit Reviewer: Dona J. Bergman, EEPA

TSD163-15089-00155
Page 4 of 4

- (c) Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the paint booth shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Compliance will be assumed if the following requirements are met:

- (a) Filters must be in place when spray paint booth is in operation.
- (b) Visual Inspections for overspray must be made once a month while the spray paint booth is being used. A record of these inspections must be kept and be available for review by IDEM or the Evansville EPA.
- (c) Quarterly perimeter checks for areas affected by overspray. A record of these checks must be kept and be available for review

326 IAC 8-2-9 (Volatile Organic Compounds, Surface Coating emissions limitations: miscellaneous metal coating operations)

This source performs miscellaneous metal coating operations as described in 326 IAC 8-2-1(a)(4) and has actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls. The source uses coatings that comply with the VOC content limitations as described in 326 IAC 8-2-9(d) of less than forty-two hundredths (0.42) kilograms per liter (three and five-tenths (3.5) pounds per gallon). Therefore the requirements contained in 326 IAC 8-2-9 apply.

Conclusion

The construction and operation of this spray paint booth and cure oven shall be subject to the conditions of the attached proposed **Registration Source Operating Permit 163-15089-00156**.

POTENTIAL TO EMIT CALCULATIONS:

Description	Density lbs/gal	lb. VOC/ gal. coating	gal. used/ unit	Maximum units/hr	hours/yr.	Tons VOC/yr.
WSR109 Paint	8.55	2.35	0.034	40	8760	13.998(WORST CASE)
WSR312 Paint	9.04	2.12	0.034	40	8760	12.628
WSR360 Paint	9.00	2.28	0.034	40	8760	13.582
WSR367 Paint	9.10	2.25	0.034	40	8760	13.403
WSR625 Paint	8.83	2.32	0.034	40	8760	13.820
WSR723 Paint	9.03	2.24	0.034	40	8760	13.343
WSR1050 Paint	8.95	2.31	0.034	40	8760	13.760

ALL WATER BASED PAINTS. SOURCE HAS ONE SPRAY PAINT BOOTH AND CAN PAINT ONLY ONE COLOR AT A TIME. WORST CASE FOR VOC IS WSR109, WHICH HAS A VOC CONTENT OF 2.35 LBS/GAL (LIMIT PER 326 IAC 8-2-9(d)(2) is 3.5 LGS/GAL VOC CONTENT).

CLEAN UP IS WITH WATER.

INFORMATION BASED ON PERMIT APPLICATION, MSDSs, AND VERBAL INFORMATION PROVIDED BY THE SOURCE.

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Page 1 of ? TSD App A

Company Name: Sky Cylinder Testing
Address City IN Zip: 2220 Lexington Road, Evansville, IN 47719
CP:
Plt ID: 156.00000
Reviewer: LJS
Date: 12/13/01

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
worst case coating	9.0	73.06%	53.7%	19.3%	58.2%	26.94%	0.03400	40.000	4.18	1.75	2.38	57.00	10.40	2.90	6.48	80%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%
	0.0	0.00%	0.0%	0.0%	0.0%	0.00%	0.00000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	ERR	0%

State Potential Emissions	Add worst case coating to all solvents	2.38	57.00	10.40	2.90
----------------------------------	---	-------------	--------------	--------------	-------------

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

surcoat.wk4 9/95